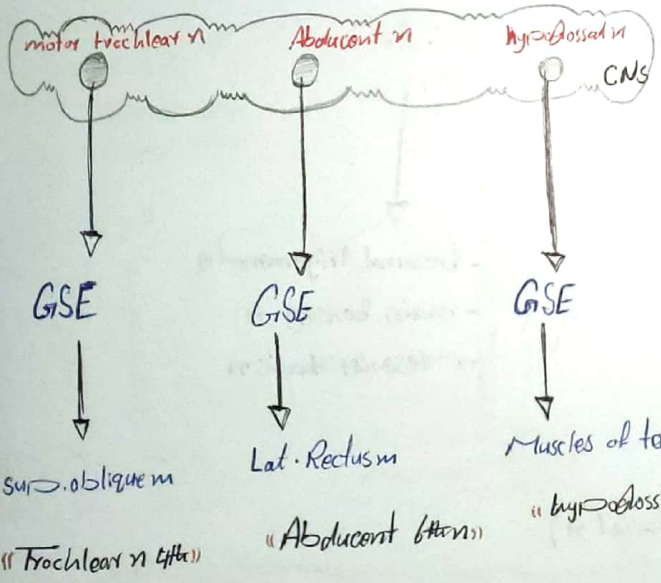
بسم الله الرحمن الرحيم

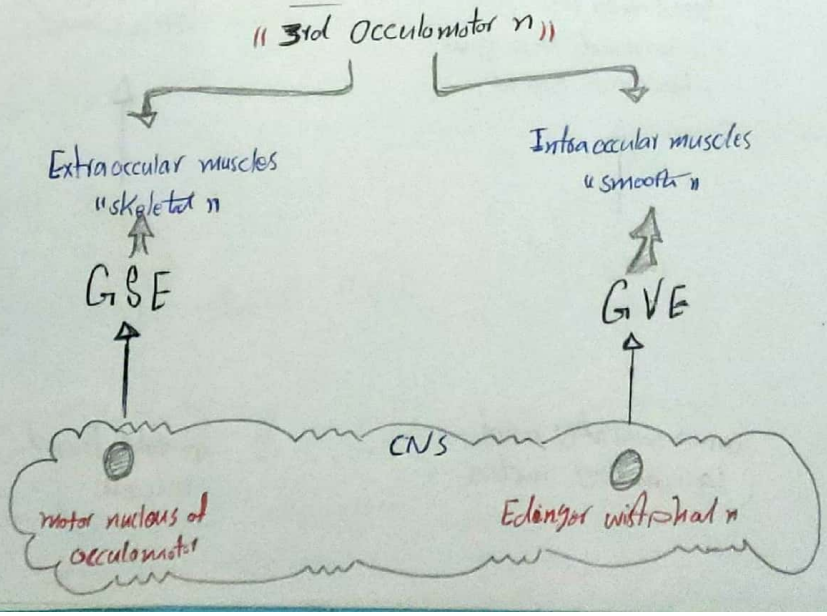
Deep origin and types of Cranial nerves

- **G** → **General** → All motor or sensory except motor of branchial m and sensory of special sense
- **S** → **special** → Only for sensory of special sense or motor of branchial muscles
- **Somatic** S → skin, skeletal muscles
- **Visceral** √ → - mucus memb. - smooth muscles - Glands - motor to branchial m.
- **Afferent** → sensory
- **Efferent** → motor.



Q: Trochlear n. arise from motor trochlear n and carry GSE fibers to supply sup. oblique m.

وعليك بتم وصف بقية وتابع



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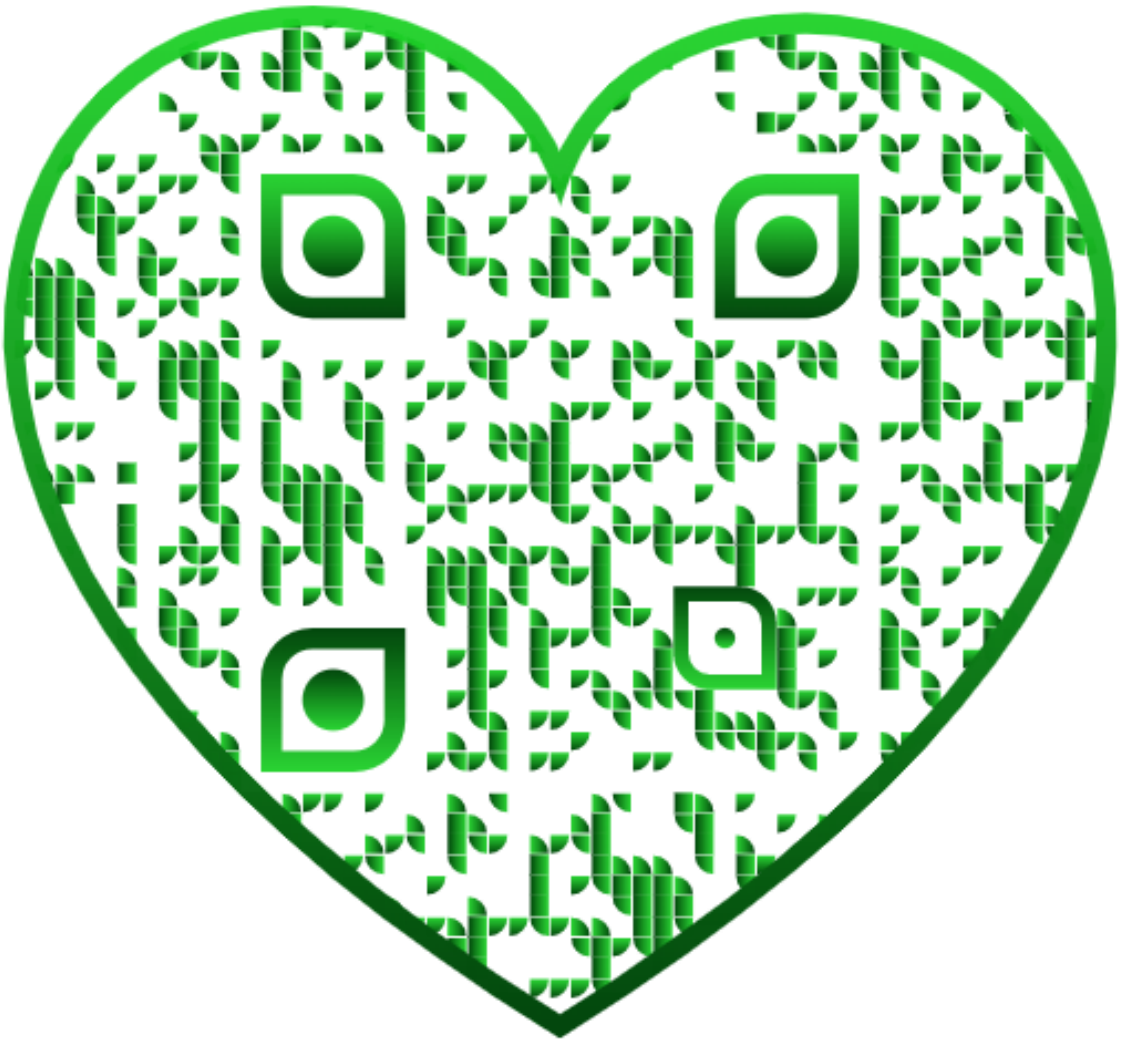

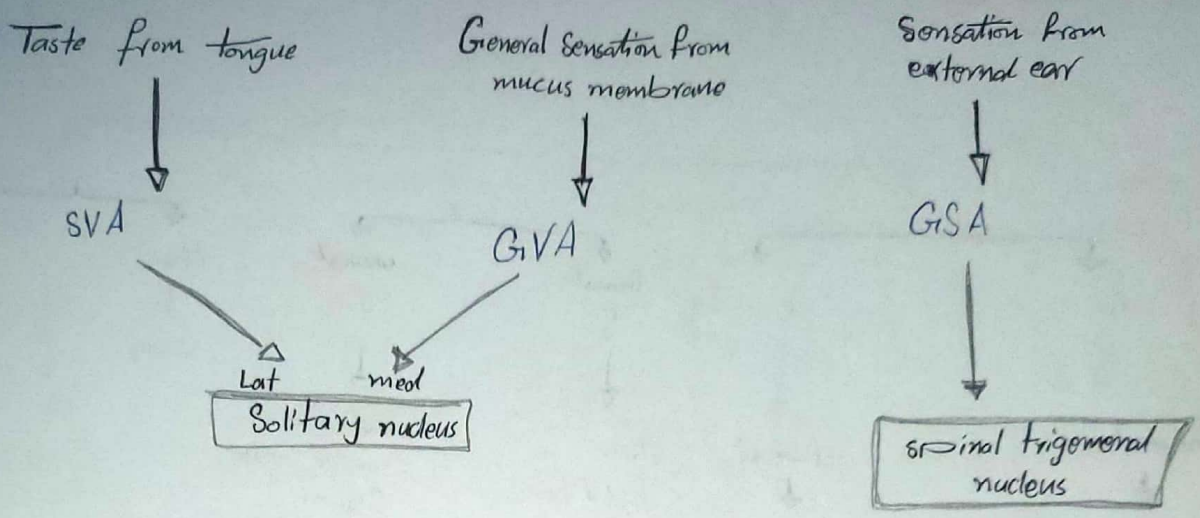

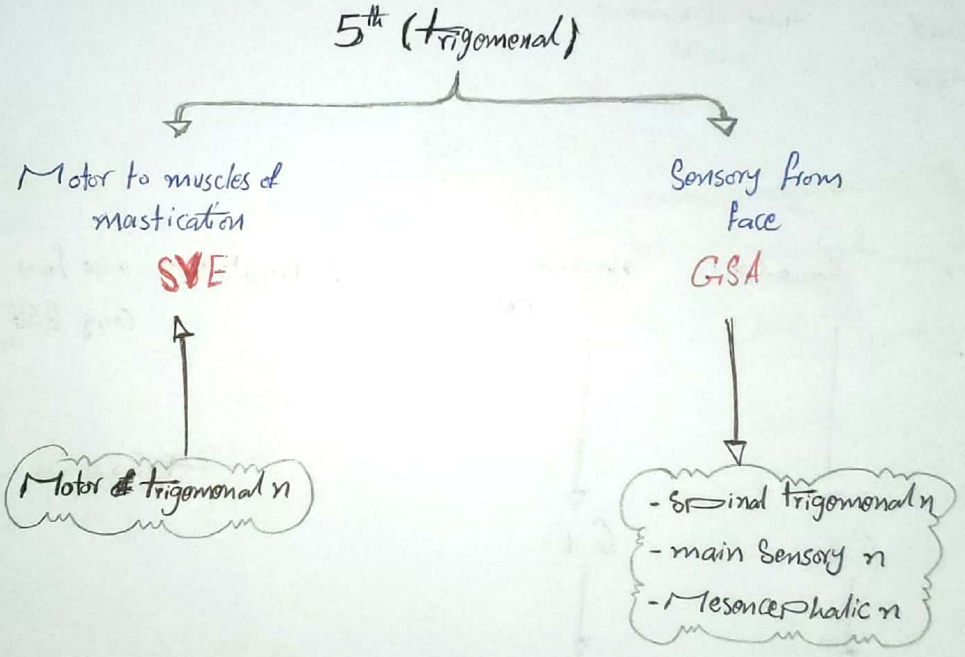

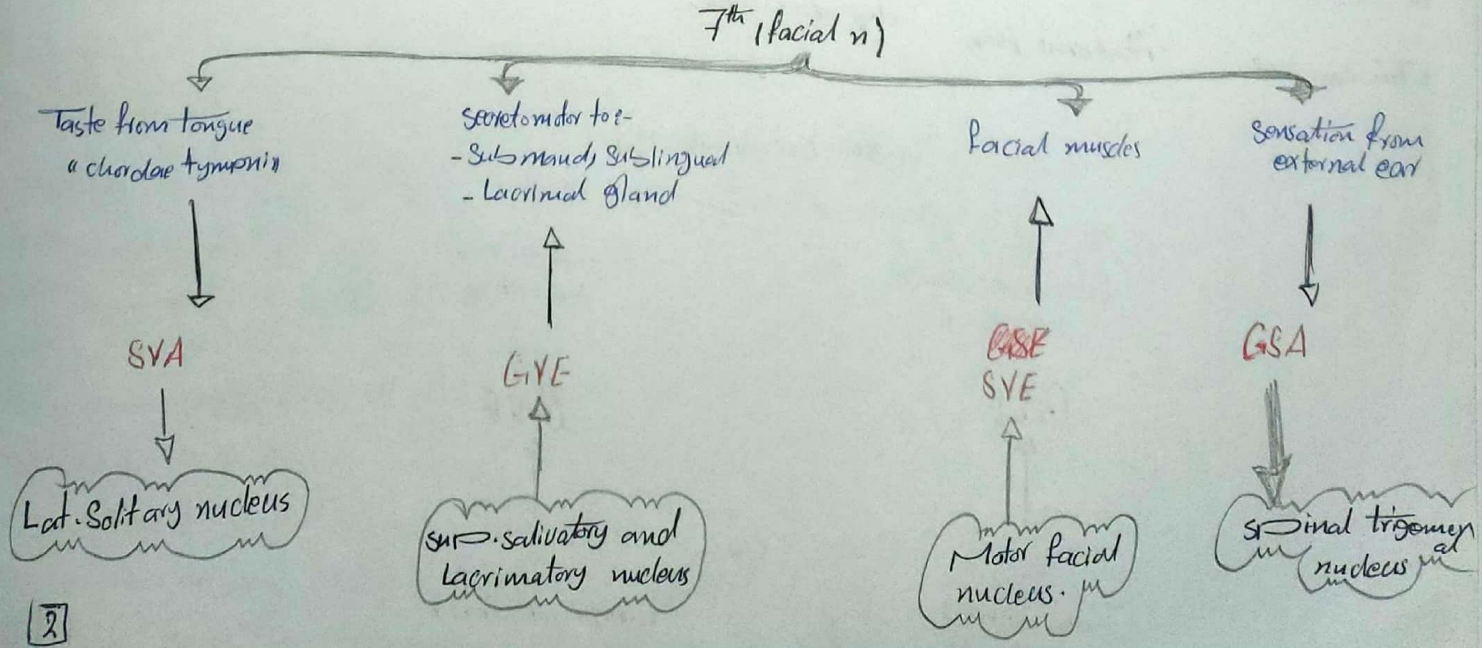

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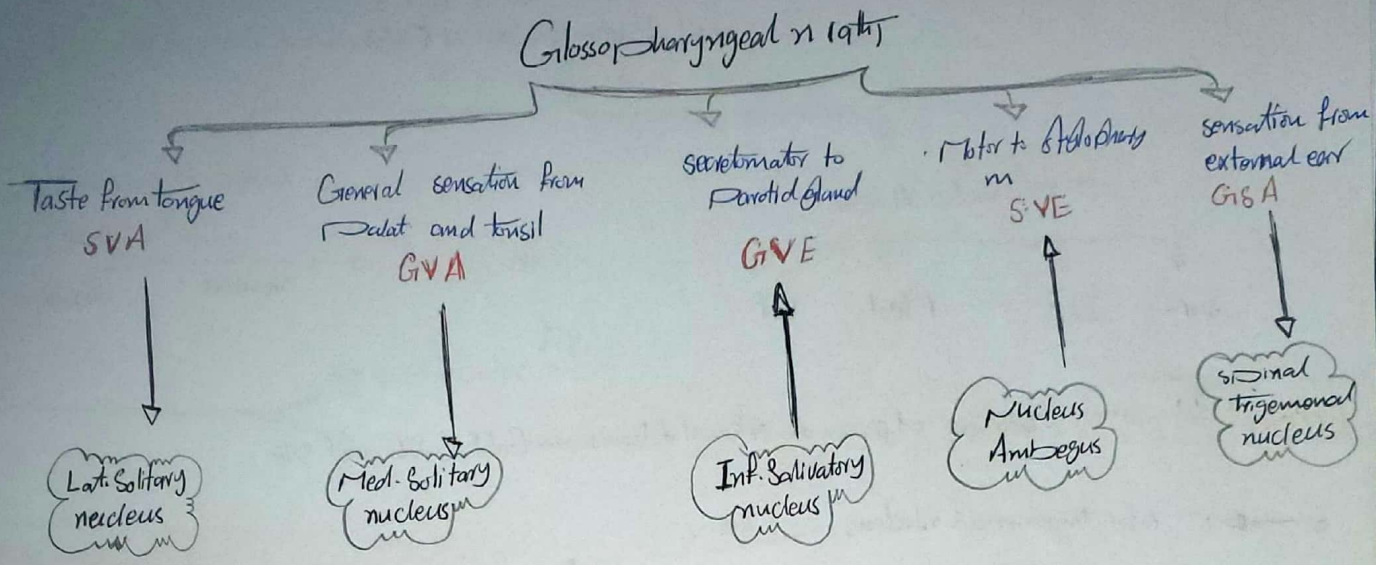

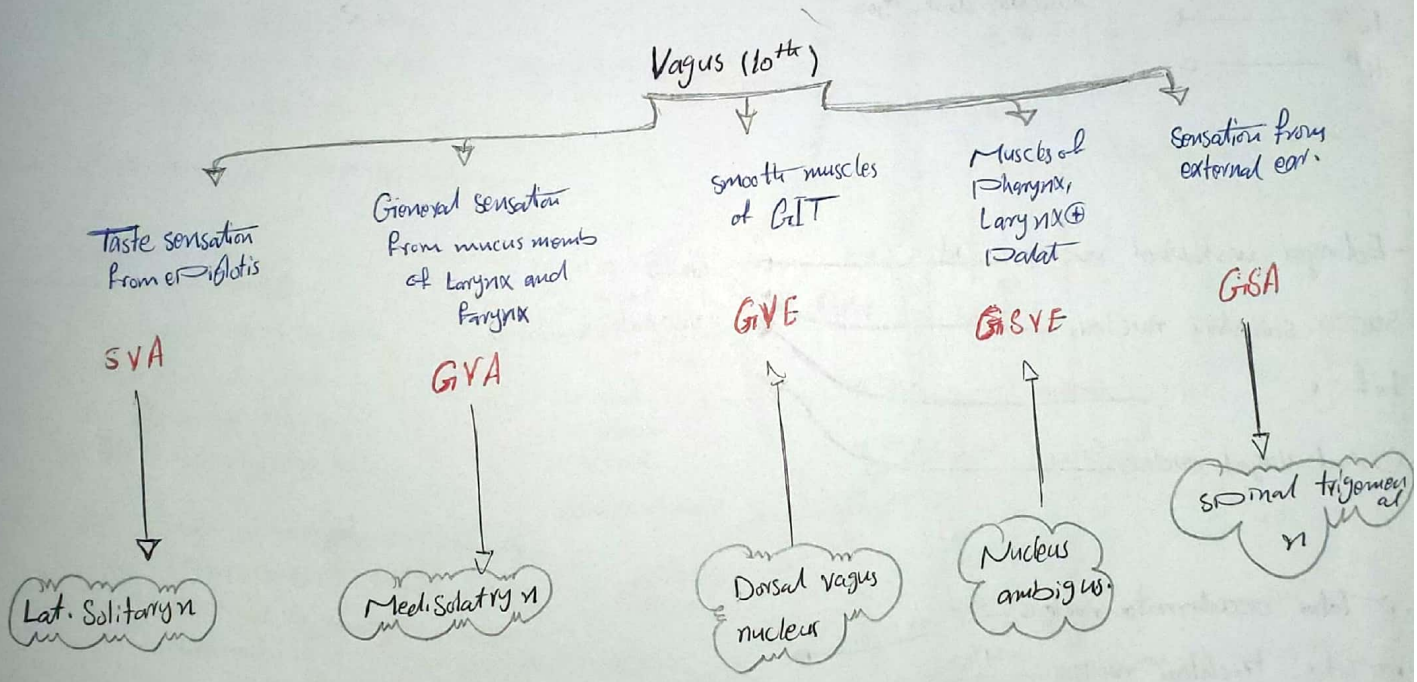

→ Types of fibers of Cranial nerves-

3rd → GSE - GVE

4th → GSE

5th → GSA - SVE & GVA

6th → GSE

7th → SVA - GVE - SVE - GSA

8th → SSA

9th → SVA - GVA - GVE - SVE - GSA

10th → SVA - GVA - SVE - GVE - GSA

11th → SVE ... branchial muscles.

12 → GSE

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Vestibulo-cochlear n (8th)

4 Vestibular Nuclei — Sup, Inf, Med, Lat

2 cochlear nuclei — Ventral, dorsal

SSA

Efferent fibers:- - There are 3 types of efferent fibers ..... GSE, GVE and SVE

5 → Motor trigeminal nucleus — 5th n

7th → " facial nucleus — 7th n

9th, 10th and 11th → Nucleus ambegus

SVE ("Branchiomotor")

- Edinger wistaphel nucleus — 3rd n Carry
- Sup. salivatory nucleus — Carried by 7th
- Inf. " " — Carried by 9th n
- Dorsal Vagal nucleus — Carried by 10th n

GVE ("Visomotor")

- Motor occulomotor nucleus — 3rd n Carry
- Motor trochlear nucleus — 4th n Carry
- Abducent nucleus — 6th n Carry
- Hypoglossal nucleus — 12th n Carry

GSE ("Somatomotor")

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Types of Afferent f. basis

GSA — carried by 5th n →
- Main sensory nucleus
- spinal trigeminal nucleus
- Mesencephalic nucleus

GVA → Solitary nucleus
SVA →

SSA →
- 4 vestibular nuclei
- 2 cochlear nuclei

Sites of Cranial n nuclei in the brainstem

Cranial n nuclei in midbrain

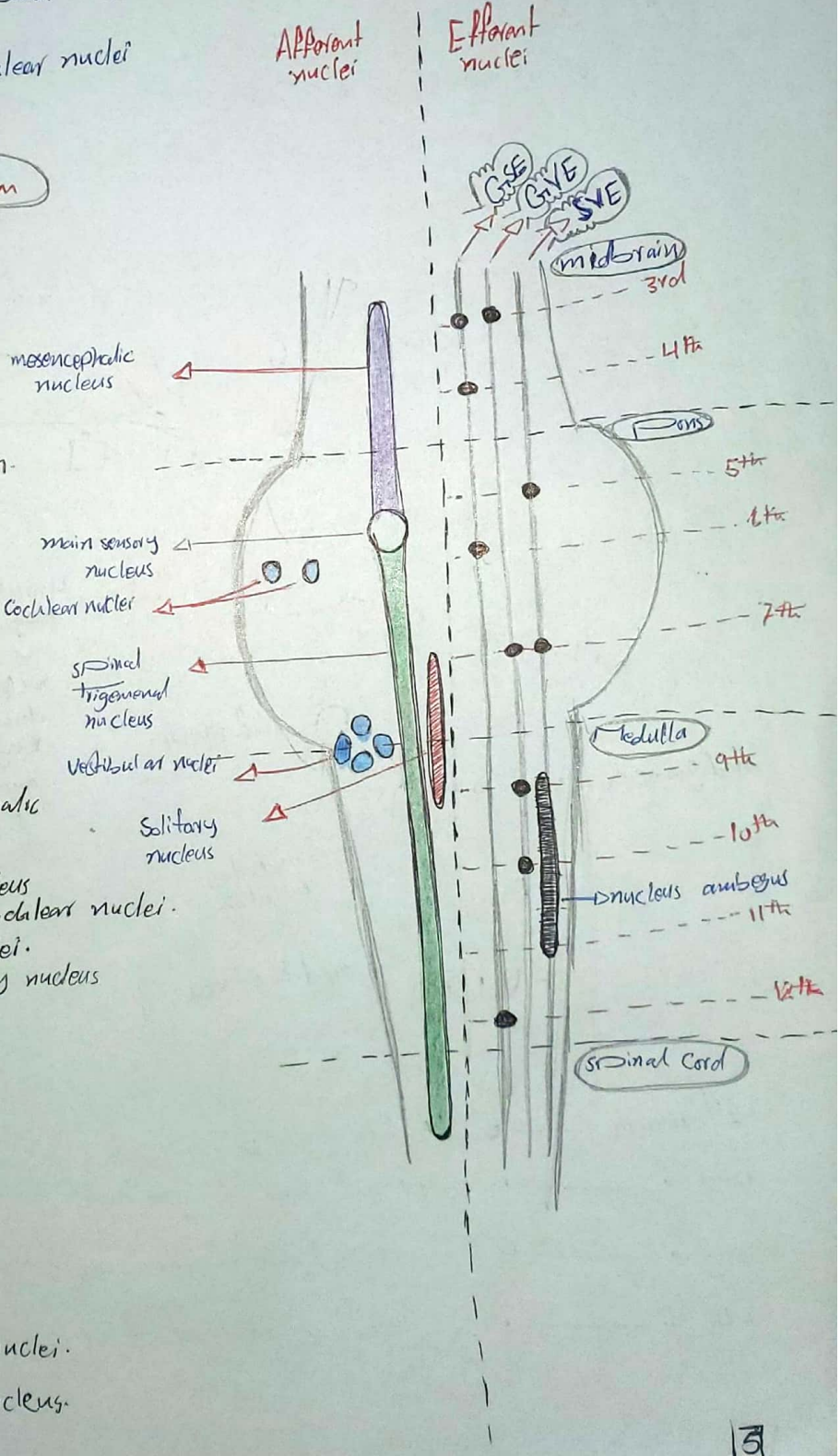
- Efferent nuclei:
  - Edinger westphal nucleus
  - Motor oculomotor nucleus
  - Trochlear nucleus.
- Afferent: upper part of mesencephalic n.

Cranial n nuclei in pons

- Efferent:
  - Trigeminal motor nucleus
  - Abducent nucleus.
  - Motor facial nucleus.
  - sup. salivary nucleus.
- Afferent nuclei:
  - Lower part of mesencephalic
  - Main sensory nucleus
  - spinal trigeminal nucleus
  - Ventral and dorsal cochlear nuclei.
  - upper vestibular nuclei.
  - " part of solitary nucleus

Cranial n nuclei in medulla

- Efferent:
  - Ambegus
  - Inf. salivary.
  - Dorsal vagus
  - Hypoglossal nucleus.
- Afferent:
  - spinal trigeminal nucleus
  - Lower part of vestibular nuclei.
  - Lower part of solitary nucleus.



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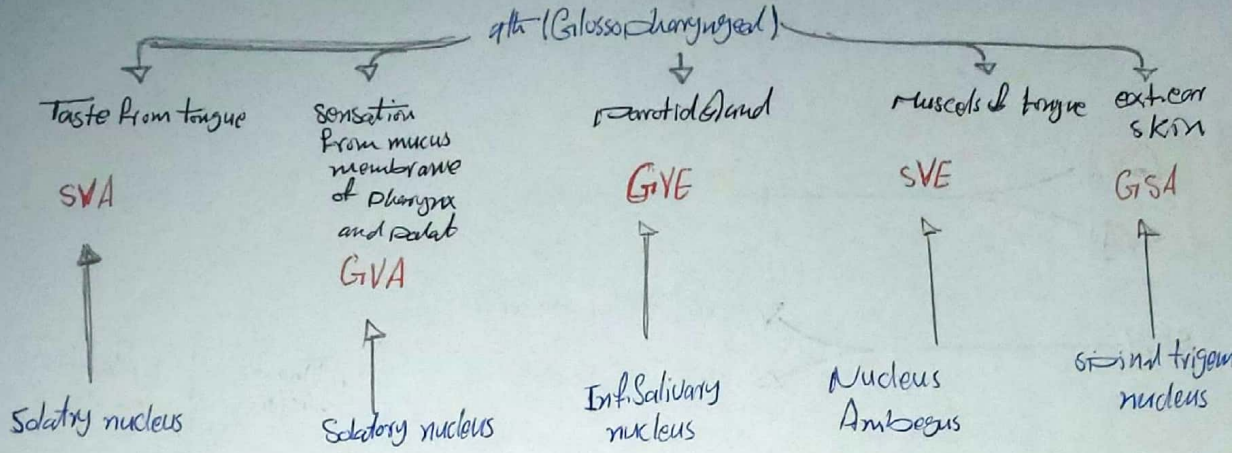
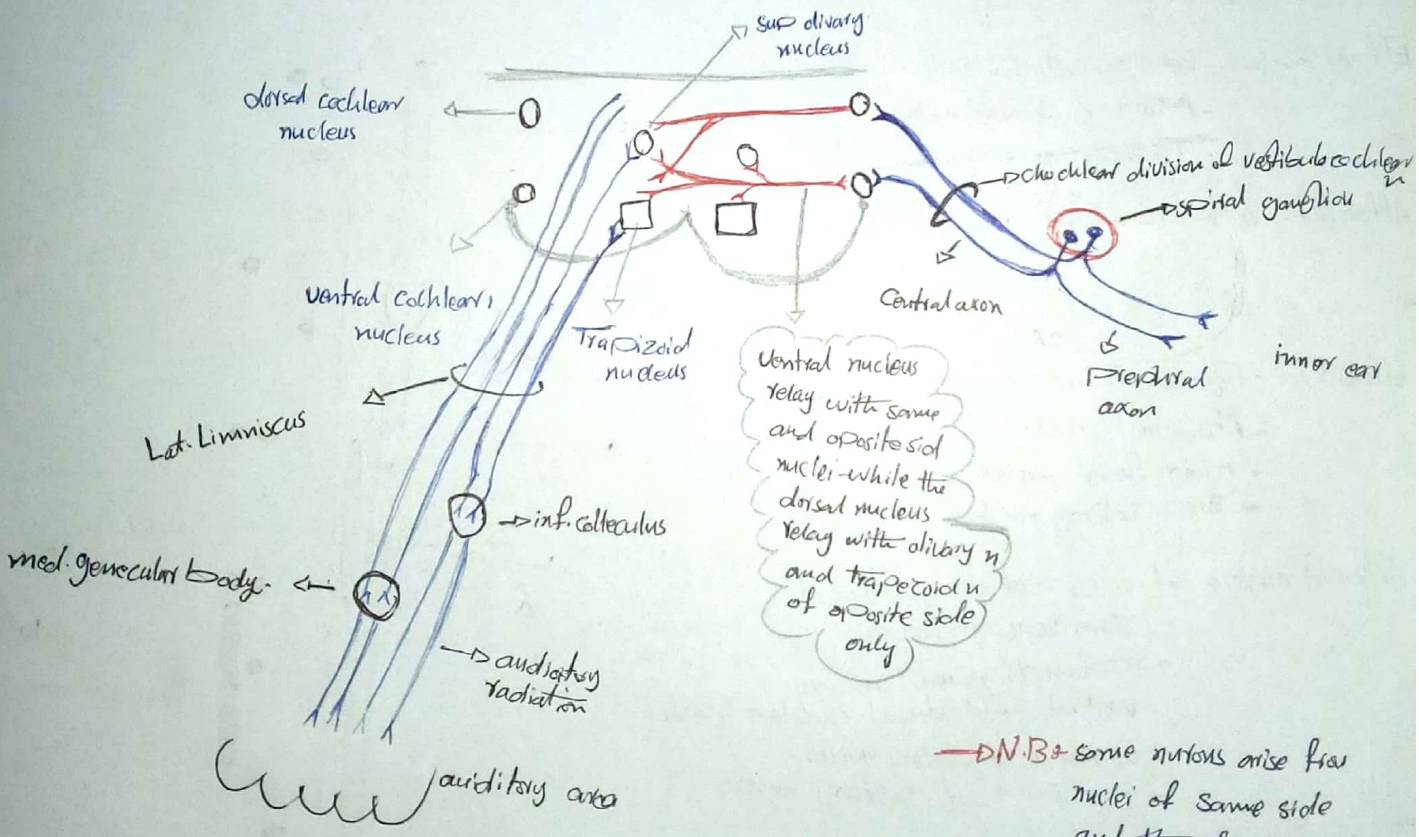
Examples:

→ Glossopharyngeal n.





→ N.B: some nurons arise from nuclei of same side and those for complete cut of lat limniscus does not lead to lose of hearing...

1st neuron → spiral ganglion

2nd " → ventral and dorsal cochlear nuclei

3rd " → Trapezoid and olivary of same and opposite side

4th " → Inf. Colliculus & med genecular body.

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